

UNITED STATES  
v.  
JAMES A. WALPER

IBLA 82-65

Decided November 14, 1983

Appeal from decision of Administrative Law Judge E. Kendall Clarke declaring lode mining claims null and void for lack of discovery of valuable mineral deposit. AA-24194.

Affirmed.

1. Evidence: Prima Facie Case--Mining Claims: Contests--Mining Claims: Determination of Validity--Mining Claims: Discovery: Generally

The Government has established a prima facie case of the lack of discovery of a valuable mineral deposit on mining claims where a Government mineral examiner testifies that, based on assays of his samples taken from the claims, the mineral deposit is not of sufficient quality to justify expenditure of capital with a reasonable prospect of success in developing a valuable producing mine. Such an opinion is sufficient to establish a prima facie case where it is based in part upon comparison with the minimum acceptable grade of ore at an operating mine and in part upon an analysis of prior reports of exploration of the claims.

2. Evidence: Sufficiency--Mining Claims: Contests--Mining Claims: Determination of Validity--Mining Claims: Discovery: Generally

A mining claimant has not preponderated on the question of discovery of a valuable mineral deposit where the evidence establishes that further exploratory drilling is required to ascertain the extent of the only mineralized zone with significant potential prior to the investment of capital with a reasonable prospect of success in developing a valuable mine.

APPEARANCES: Scott K. Walker, Esq., Bellingham, Washington, for the appellant; Dennis J. Hopewell, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Anchorage, Alaska, for the Bureau of Land Management.

## OPINION BY ADMINISTRATIVE JUDGE GRANT

The estate of James A. Walper 1/ has appealed from a decision of Administrative Law Judge E. Kendall Clarke, dated September 10, 1981, declaring the Nuna No. 1 through Nuna No. 30 and Nuna No. 34 through Nuna No. 38 lode mining claims null and void for lack of discovery of a valuable mineral deposit.

On June 5, 1979, the Bureau of Land Management (BLM), filed a contest complaint on behalf of the National Park Service, charging: "There are not presently disclosed within the boundaries of the mining claims, minerals of a variety subject to the mining laws, sufficient in quantity, quality, and value to constitute a discovery." A hearing was held on October 6, 1980, in Bellingham, Washington, before Administrative Law Judge Clarke. After reviewing all of the evidence and the applicable law, the Administrative Law Judge concluded that the Government had established a prima facie case of the lack of discovery of a valuable mineral deposit and that appellant had not overcome that case by a preponderance of evidence.

In his statement of reasons for appeal, appellant contends that the Government did not establish a prima facie case because the testimony of the Government mineral examiners was not supported by adequate knowledge of the grade or tonnage of molybdenum ore on the claims or the costs of extraction, removal and marketing. Appellant had moved at the hearing to dismiss the case after the presentation of the Government's case (Tr. 118). The motion was denied (Tr. 124).

[1] After carefully reviewing the testimony of the Government mineral examiners, we conclude that it was sufficient to establish a prima facie case of the lack of a discovery. Amos Klein, one of the Government mineral examiners, based his conclusion of a lack of discovery in part on the "low" grade of the ore (Tr. 32). Samples were taken from core fragments at an abandoned drill site and areas of visible mineralization (Tr. 23-8). There were no workings on the claims to sample other than core segments left behind from earlier drilling. A representative sample from one of these cores was taken for assay by the Government mineral examiner. Assays of the four samples taken from the claims indicated an average grade of molybdenum sulfide (MoS[2]) of 0.1 percent (Tr. 45). 2/ This grade was lower than the minimum exploitable (cutoff) grade at the Urad-Henderson mine in Colorado which was 0.2 percent MoS[2] (Tr. 41). 3/ Klein also based his conclusion on the absence of an observable quantity of ore (Tr. 32). The two Government mineral examiners

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1/ James A. Walper died on Feb. 21, 1980, prior to the decision which is herein being appealed. The record indicates that this appeal is being pursued by his estate.

2/ Throughout the record, the grade of molybdenum ore has been set forth either in terms of molybdenum (percent Mo) or in terms of molybdenum disulfide (percent MoS[2]). Molybdenum disulfide, otherwise known as molybdenite, is the source of molybdenum on these claims. For the sake of consistency, we will use grade expressed in terms of percent MoS[2]. Where necessary, we will convert percent Mo to percent MoS[2] using the conversion factor (1.688) set forth in the hearing transcript at page 153.

traversed significant portions of appellant's claims, looking for signs of surface mineralization (Tr. 81-4). Finally, Klein based his conclusion on the lack of available power for beneficiation of the ore (Tr. 32).

On cross-examination, both Government mineral examiners admitted that they had made no estimate of the quantity of ore available from the claims (Tr. 46, 114). In addition, neither of the Government mineral examiners testified that they had any specific knowledge of the costs of extracting, removing, and marketing the ore.

We agree that the expert opinion of a Government mineral examiner must be formed on the basis of probative evidence. See United States v. Winters, 2 IBLA 329, 78 I.D. 193 (1971). However, in this case, it was not necessary that the opinion of the Government mineral examiners be based upon a personal estimate of the tonnage of the deposit coupled with specific knowledge as to costs of extraction in order to establish a prima facie case. It was not improper for the Government mineral examiners to use the Urad-Henderson mine as a standard by which to judge the quality of the ore in terms of the prospect of success in developing a valuable mine. The standard is certainly relevant even if it is not conclusive on the issue. The Urad-Henderson mine, operated by AMAX, Inc., is one of the predominant domestic mines, which, along with the Climax mine and the Questa mine, account for two-thirds of domestic molybdenum production. Kuklis, Molybdenum, Mineral Facts and Problems 699,700 (1975 ed.) (Bureau of Mines Bulletin 667).

The record discloses that the Nunatak (the mountain on which the claims were located) was the subject of substantial prior investigation. The Government mineral examiners considered the reports of prior exploration and investigation of the Nunatak molybdenum deposit both before examining the claims and before testifying at the hearing. The testimony of Klein reveals that the contestee had declined to provide any technical information regarding the claims (Tr. 31). However, available technical literature on the Nunatak, including the Twenhofel report (admitted at the hearing as Exh. B) and the report of the Bureau of Mines investigation (admitted as Exh. C), was reviewed prior to the field examination according to Fred Spicker, one of the Government mineral examiners (Tr. 76-80). In addition, the 1978 Geological Survey report entitled "Mineral Resources of the Glacier Bay National Monument Wilderness Study Area, Alaska" (admitted as Exh. A at the hearing), was subsequently reviewed prior to the hearing (Tr. 78). <sup>4/</sup>

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<sup>3/</sup> Klein testified that he talked to the operators of the Henderson mine regarding the acceptable grade of molybdenite ore. Klein stated: "Information that I got from them indicates that they have a .5 as their ore grade. They take nothing less than .2. So their ore ranges anywhere from .2 to .5 molybdenum sulfide" (Tr. 41).

<sup>4/</sup> On cross-examination of the Government mineral examiners, counsel for contestee made a point of the fact that the most recent report, exhibit A, had not been studied by them prior to examination of the claims. In subsequent testimony it was disclosed that the examiners tried to obtain the report as well as a copy of the report prepared by contestee's consultant, George Moerlein, but that they were refused access to this information by the Bureau of Mines until some time after the examination was completed (Tr. 77). Contestee could have facilitated the examination by providing this data to the examiners prior to their examination of the claim.

Klein testified that the assay results obtained from his examination were similar to those disclosed by the examination conducted by the Bureau of Mines, Amex, and Superior Oil (Tr. 30). Asked if his opinion was altered by the Survey report (Exh. A), Klein replied that "The only thing that would alter my opinion would be the higher grades, if they were available" (Tr. 53). Spicker testified similarly regarding the consistency of the assays of samples taken by the mineral examiners with the reports of prior exploration results (Tr. 93). Spicker also testified that the results of exploration reported in exhibit A would not justify a different conclusion regarding the validity of the claims (Tr. 94). Accordingly, we affirm the finding of the Administrative Law Judge that the testimony of the mineral examiners established a prima facie case with respect to the lack of mineralization of sufficient quality to find that there had been a discovery on the claims.

[2] We turn, therefore, to the question of whether appellant preponderated on the issues raised at the hearing into the validity of the claims. Appellant relies on a number of reports made over the years with respect to the molybdenum deposit of the Nunatak. These reports were summarized in the 1978 Geological Survey report (Exh. A). The area has been sampled by 12 drill holes and numerous chip samples. The Survey report describes three estimated component parts of the Nunatak molybdenum deposit. The first, stockwork with conspicuous molybdenite, contains 8.2 million tons of indicated resource and 9.1 million tons of inferred resource, with an average grade of 0.1 percent MoS[2] (Exh. A at C-294). 5/ The second, stockwork with inconspicuous molybdenite, was estimated to contain 137 million tons of indicated resource, with an average grade of 0.07 percent MoS[2]. Id. The third component consisting of two "mineralized zones," was intercepted by three drill holes, indicating a thickness of between 50 feet and 160 feet and a grade ranging from 0.19 to 0.24 percent MoS[2]. Id. at C-292. The Survey report concluded that these "mineralized zones" could prove to be the highest grade resource in the deposit but that not enough was known to calculate tonnage or grade. Id. at D-19. The Nunatak deposit "as presently known" was stated to be "between the 50th and the 90th percentile in size and just below the 10th percentile in grade," when compared with known porphyry-molybdenum deposits of the world. Id. at D-37. In addition, the report stated that "[i]n evaluating the mineral resource potential of this favorable area, we assume that the minimum size and grade deposit that would attract serious interest would have at least \* \* \* 100 million tons \* \* \* of resources containing between 0.15 and 0.20 percent molybdenum [between 0.25 and 0.34 percent MoS[2]]." Id. at D-38.

Appellant also relies on the testimony of George A. Moerlein, a mining geologist, who in 1968 engaged in test drilling of the Nunatak on behalf of the Superior Oil Company, which held an option on the claims. A total of seven holes were drilled. The results of the test drilling are summarized in a report entitled "Geology and Drilling Results, Nunatak Molybdenum Prospect, Walper Property, Southeastern Alaska" (December 1968). This report was admitted into evidence as exhibit H at the hearing. This test drilling formed

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5/ The term "resource," which includes mineral deposits in such form that economic extraction is potentially feasible, is properly distinguished from the term "reserve" which includes a mineral deposit that can be economically extracted currently (Exh. A at D-2; Tr. 86).

the basis for the third component part of the Nunatak deposit, the "mineralized zones" identified in the Survey report. See Exh. A at C-292.

In his report, Moerlein identified six reasons for "doing nothing more" with regard to the Nunatak deposit. Briefly stated, they are the fact that the grade of ore is "generally low," the width of the mineralized zone is open to question and overall tonnage may be "small," the mineralization is almost certainly "discontinuous," mining would have to be underground, and the cost of mining in Alaska is "high" (Exh. H at 3). Moerlein, however, identified other reasons for doing "some additional work," which, he concluded, would outweigh the reasons for doing nothing. Id. at 4. Moerlein stated that mining costs would not be much higher in Alaska: "I would expect development costs to be more, perhaps by 25%, than those at Questa, let us say, mainly because of transportation and logistics. But the operating costs should not be appreciably more." Id. Moerlein also stated that while the Questa deposit was amenable to open pit mining, the higher grade of the Nunatak deposit (0.24 percent MoS[2]) would pay for "the additional costs of going underground." Id. Moreover, Moerlein expected the values to be "increasing with depth." Id. Moerlein estimated the potential tonnage to be "little over 60 million tons" and stated: "True, this is marginal -- even submarginal, but what we know of this mineralized zone is almost nothing." Id. at 5. Moerlein concluded that the Nunatak deposit "has great potential and this potential is deserving of a few more drill holes." Id. Moerlein outlined a plan for drilling three to five additional holes "depending upon the results \* \* \* Generally, I would say that if we drilled three duds I would be ready to give up. We would have eliminated too much tonnage to justify any further work." Id. at 5-6.

Moerlein was similarly candid in his testimony about whether the information known about the claims at present is sufficient to justify the expenditure of capital in developing a producing mine. He stated that it could not be done without more exploration (Tr. 160). In response to inquiry as to how much further exploration would be reasonably required before proceeding with development, Moerlein replied "100,000 feet, plus or minus, a lot drilling" (Tr. 161).

Appellant also relies heavily on a table of 36 molybdenum deposits included in Woodcock and Hollister, "Porphyry Molybdenite Deposits of the North American Cordillera" 10 Minerals Sci. Engng. 3, 7 (Jan. 1978) (Exh. D). The table sets forth the average grade and reserves of the deposits. On cross-examination, Moerlein identified certain of the deposits which he knew were subject to mining operations, namely, Roundy Creek and Lime Creek collectively known as the Alice Arm), Endako, Urad-Henderson, Climax, and Questa (Tr. 169). In particular, Moerlein stated that the Nunatak deposit is similar to the Alice Arm deposit in terms of tonnage and grade (Tr. 155-6). Exhibit D indicates reserves at Lime Creek of 45 million tons, with an average grade of 0.23 percent MoS[2], and reserves at Roundy Creek of 1.4 million tons with an average grade of 0.34 MoS[2]. Exhibit D also indicates reserves at Endako of 330 million tons, with an average grade between 0.1 and 0.21 percent MoS[2]. A letter to the Chief Geologist, Phelps Dodge Corporation (Phelps Dodge) from the Manager of Exploration, Phelps Dodge, dated November 10, 1969 (Exh. F), describes the Endako operation as "very profitable" and the Alice Arm operation as "about breaking even." Phelps Dodge had itself evaluated the Nunatak deposit in 1969 and concluded that it was "marginal" (Exh. F at 2). Reserves were estimated at 53 million tons, with an average grade of 0.17 percent MoS[2].

It is evident from a review of all of the evidence that the only potentially favorable component of the molybdenum deposit on the Nunatak is that identified by Moerlein as the "mineralized zones." In terms either of tonnage, grade, or a combination, the other component parts of the deposit are not comparable to the molybdenum deposits being mined at Urad-Henderson, Endako, or Alice Arm. In addition, appellant has not identified any factor with regard to the Nunatak deposit, which would compensate for the lower grade and/or tonnage of that deposit. Moreover, as stated in the 1978 Survey report, no reasonably accurate estimate of the grade and tonnage of molybdenum in the "mineralized zones" has been made. Even if we assume 60 million tons between 0.19 and 0.24 percent MoS<sub>2</sub>, this would not meet the minimum size and grade "that would attract serious interest," according to Survey (Exh. A at D-38).

The Administrative Law Judge also specifically relied on Moerlein's statements to the effect that more exploration was needed. On appeal, appellant states that, read in the context of all of Moerlein's testimony, his statements do not indicate that more exploration is needed before a mining operation may reasonably commence, but only that such exploration is needed in order to maximize production. This characterization is contradicted by numerous statements made by Moerlein, especially in his 1968 report, to the effect that more drilling was needed in order to be able to determine whether the Nunatak deposit justified eventual mining operations.

We conclude that appellant has not preponderated on the issues raised at the hearing and, therefore, concur with the conclusion of Administrative Law Judge Clarke. In terms either of the quality or quantity of the molybdenum deposit, appellant has not established that a prudent man would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

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C. Randall Grant, Jr.  
Administrative Judge

We concur:

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Will A. Irwin  
Administrative Judge

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Edward W. Stuebing  
Administrative Judge

